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Financial hardship and well-being: a cross-national comparison among the European self-employed

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Based on data from the 2004 and 2010 European Social Survey, this multidisciplinary and cross-national comparative study investigates the relationship between financial hardship and subjective well-being among 9,755 self-employed individuals from 31 European countries. It also aims to identify potential mitigating factors in this relationship on both the individual and the country level. Multilevel regression analyses reveal a strong relationship between financial hardship and impaired well-being, explaining about 36% of variance in well-being between conditions (countries and time periods) and 8% of variance between individuals. In other words, economic conditions matter significantly. Additionally, education and social trust act as important buffering factors for individuals, and the relationship between financial hardship and impaired well-being is somewhat weaker for self-employed persons living in countries with a more supportive social policy in the form of unemployment allowance. Entrepreneurs can hence mitigate the consequences of financial hardship by protecting social resources, and policymakers can be advised to invest in education and social security.

Keywords: financial hardship; subjective well-being; self-employed; cross-national; COR theory

The financial crisis of 2008 turned into a general economic downturn in Europe. Economic growth declined and the unemployment rate rose to the highest level in a decade. Seven years later, the financial crisis and the future of the European Union are still the focus of academic and policy debates. These debates often promote entrepreneurship as a strategy for recovery, leading to sustainable economic growth (Centre for European Economic Research, 2015).

Despite the prevalence of such debates and the fact that 16.8% of the European labour force were self-employed in 2010 (OECD, 2010), very few studies have investigated the effects of financial hardship on the self-employed (see Andersson, 2008; Dolinsky & Caputo, 2003). Hardship occurs when self-employed persons perceive financial constraints or expect financial problems in the future (see Schieman & Young, 2011). The OECD (2013) argues that income and wealth are essential components of individual well-being, in this article defined as an individual's life satisfaction, happiness, and health. Income allows people to satisfy their needs and pursue many other goals that they deem important to their lives, while wealth allows them to sustain their choices over time. Both income and wealth enhance individuals' freedom to live the life of their choosing. Moreover, higher incomes are associated with improvements in other

dimensions of well-being, such as life expectancy and educational attainment (OECD, 2013). Financial hardship, on the contrary, is likely to lead to depressed affect, which in turn causes the self-employed to want to withdraw from their business (Pollack, Vanepps, & Hayes, 2012). In public health, McDaid et al. (2013) found a relationship between financial hardship and stress, anxiety and depression among the economically vulnerable, related to poor health, disease, and even suicide. Similar findings have been registered by the World Health Organization (2011) and other public organizations. Stress related to financial hardship may relate to health problems and the adoption of unhealthy behaviour, such as smoking and drug and alcohol abuse. Sociologists have further shown that the cognitive emotion of shame and guilt might cause a small number of mostly male entrepreneurs to commit murder or suicide, experience a psychotic disorder, or embark on destructive alcohol abuse (Smith & McElwee, 2011). Financial worries intensify personal strain and may therefore inhibit the recovery process (Weller, 2012).

Financial hardship may have an even stronger impact on the well-being of the self-employed, who are often exposed to conditions known to generate high levels of stress (e.g., rapid change, unpredictable environments, work overload, and personal responsibility for others)

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(Baron, Franklin, & Hmieleski, 2013). Stress-related symptoms may intensify entrepreneurs' intention to quit their business, leading to a deterioration of their objective financial situation (Gorgievski, Bakker, Schaufeli, Van Der Veen, & Giesen, 2010). Cardon and Patel (2014) show that the self-employed tend to continue working stressfully long and labour-intensive hours in the hope of yielding productive outcomes, despite the personal health risks involved. This is in line with research by Volery and Pullich (2010) showing that the self-employed have a limited awareness and understanding of their own well-being. To make a specific contribution to the literature and policymaking for this occupational group, we have studied the effect of financial hardship on the subjective well-being of the European self-employed.

The central aim of this article is twofold. First, we investigate and compare the relationship between financial hardship and well-being among the self-employed across 31 European countries in 2004 and 2010, based on data obtained from the European Social Survey (ESS). Second, we investigate which factors on the individual and country level might buffer the consequences of financial hardship among the self-employed and how much cumulative impact these factors have. Our main research question is "Does financial hardship relate to lower subjective well-being among the self-employed in Europe and how do individual and societal conditions buffer this relationship?"

This study extends current knowledge on the relationship between financial hardship and psychological well-being among the self-employed by looking at possible moderating effects from a multilevel and multidisciplinary perspective. A multilevel perspective is considered appropriate, since qualitative research on the relationship between financial hardship and subjective well-being has revealed cross-country differences. In Greece, for example, financial hardship owing to the economic crisis had a detrimental impact on the mental health of the population, resulting in disease and disability (Economou, Madianos, Peppou, Patelakis, & Stefanis, 2013). By contrast, the populations of other countries equally affected by the economic crisis until 2010, such as Ireland, experienced a surprisingly small impact on well-being (Walsch, 2011). The legal and cultural context, which influences how individuals cope with demands, presumably differs across countries (Casper, Allen, & Poelmans, 2014). Given the current relevance of the issue in the European Union, the lack of a cross-national comparative perspective on this topic is surprising (Gudmundsdottir, 2013; Sinclair, Sears, Probst, & Zajack, 2010, p. 5). The reasons behind these cross-national differences have remained largely a mystery to date, even though they could have important implications for tailor-made policymaking. As the impact of financial hardship on subjective well-being is likely to vary

between different national economic, cultural, and social policy contexts, a multidisciplinary framework which combines psychology with social policy research and sociology increases the scientific and practical relevance of the study. Conservation of Resources (COR) theory (Hobfoll, 1989) allows us to take these different contexts into account. It provides us with a framework for testing which resources help the self-employed cope with financial hardship to maintain well-being. Research findings in the different disciplines are used to test possible moderating effects of financial hardship on well-being at multiple levels. At the individual level, we investigate the effects of the personal domain (education) and the social domain (social trust). At the country level, we include the cultural domain (self-employment rate) and the institutional domain (unemployment allowances). In the remainder of this article, we first discuss our theoretical framework and hypotheses and then the methods we have applied. We continue by outlining the results, and end with a conclusion and discussion section.

Theoretical framework and hypotheses

In this study, we build on COR theory (Hobfoll, 1989). COR theory states that motivational stress causes people to strive to protect, obtain, or retain their resources (Hobfoll, 1989, 2001). Resources are defined as those objects (e.g., housing), personal characteristics (social trust, social networks, self-efficacy), conditions (roles that define one's identity), or energies (time and money) "that are valued by the individual or that serve as a means for attainment of other valued resources" (Hobfoll, 1989). The ability to acquire and maintain resources is associated with adaptation, coping, and well-being. If resources are threatened or lost, as in the case of experienced financial hardship, stress increases, leading to impaired well-being.

From this central tenet, the principle follows that people must invest in their resources to protect against (further) resource loss, to recover from losses, and to gain resources. People who lack resources will therefore be more vulnerable to resource loss, and initial loss begets future loss, resulting in loss cycles of increasing strength and speed (Hobfoll, 2001). Compared to other stress theories, COR theory is particularly useful for studying the stress process from a cross-national comparative perspective because it is an integrative theory that considers both environmental and internal processes (Hobfoll, 2001). It recognizes that individuals are nested in families, which are nested in communities (Hobfoll, 1989). This implies that peoples' well-being is situated in the social context and responses to stressful circumstances depend not only on the individual, but also on the environment. As a result, not only more resourceful individuals but also individuals in more resourceful environments are expected to cope better with hardship.

In our study, the relationship we are most interested in is that between financial hardship and subjective well-being. Following COR theory (Hobfoll, 1989), we propose that in a situation of financial hardship, resources are threatened or lost, leading to a decline in the self-employed person's subjective well-being. We begin by testing the following hypothesis:

Hypothesis 1: Financial hardship relates negatively to self-employed individuals' subjective well-being.

Second, when losses occur, individuals are expected to apply resource conservation strategies in which they utilize the resources available to them to offset net loss (cf. Pearlin, Lieberman, Menaghan, & Mullan, 1981). It is vital to understand which resources might buffer the effect of financial hardship on subjective well-being because interrupting the loss spiral is likely to improve well-being (Hobfoll, 2001). Previous studies concerning the impact of financial hardship on health-related and well-being-related outcomes have neglected the effect of resources that might weaken this relationship, although Sinclair et al. (2010) stress that it may be mediated by aspects from multiple systems at different levels of analysis. Individuals' economic stress perceptions are embedded in personal, organizational, and macroeconomic contexts. At each level of analysis, intervening processes occur. In our study, we reap the benefits of multidisciplinary research by considering moderating mechanisms between various domains: the individual's personal (education) and social domain (social trust) and, at the country level, the cultural (self-employment rate) and policy context (unemployment allowances). The relationship between social policy and national culture is complex. Social-cultural norms, reflected in individual opinions, tend to influence the nature and design of policies, especially if they are still evolving (Raven, Achterberg, Van Der Veen, & Yerkes, 2011). Social policies can reinforce or challenge existing norms and values. In the case of highly institutionalized policies, like unemployment allowances, social policies are found to shape and influence cultural norms and values. Based on institutional theory in sociology, it is argued that policies, once established, act as institutions that define who deserves financial help and who does not (Raven et al., 2011). As such, unemployment allowances can also be seen as an example of country-level cultural facets.

In the remainder of this paragraph, we will hypothesize how variables in the domains mentioned may moderate the relationship between financial hardship and well-being among the self-employed.

In the personal domain, a potentially powerful stress-buffering resource that has been studied in the context of employment and social inequality is level of education. It has been argued that educational attainment reduces

feelings of labour market insecurity in the new global era (Blossfeld & Hofmeister, 2006), reduces perceptions of barriers to entrepreneurship (Iakovleva, Kolvereid, Gorgievski, & Sørhaug, 2014), and ameliorates the perception of health problems (Fleche, Smith, & Sorsa, 2011). Regarding the self-employed, studies note that human capital plays an important role in starting up and running a successful business (Parker, 2009). Education and experience can be considered buffering factors when dealing with financial hardship. Having a higher level of education is closely associated with an individual's feeling of control over events (Ross & Mirowsky, 2013) and the ability to quickly recognize opportunities, for example to access subsidies and loans. Education may therefore reduce the negative impact of financial hardship on subjective well-being. In sum, we expect to find that:

Hypothesis 2: Having a higher education buffers the relationship between financial hardship and subjective well-being.

In the social domain, social trust has been suggested as a buffer. Stress researchers have typically focused on social support in this regard, but here we consider a seldom-studied social resource, i.e., generalized trust. Generalized trust is an abstract attitude towards people in general. It concerns unknown groups and does not depend predominantly on specific situations (Stolle, 2002). In this study, it refers to the extent to which respondents trust most people and whether they think people generally try to be fair and helpful. Social trust is at the centre of other concepts in social science, including life satisfaction and happiness, optimism, well-being, health, economic prosperity, educational attainment, welfare, participation, community, civil society and democracy. Social trust is a core component of social capital. It is normally used as a key indicator of social capital, and sometimes as its best or only indicator (ESS EduNet, 2015). It is also a feature of social capital and refers to more basic elements of the social structure in which social support occurs. Trust is considered a valuable social resource (Putnam, 2000). It may facilitate the expansion of social networks (Yamagishi, 1998), and may also serve as a buffering mechanism by preventing the self-employed from feeling rejected and socially excluded (Smart & Leary, 2009). Our third hypothesis is:

Hypothesis 3: Social trust buffers the relationship between financial hardship and subjective well-being.

In keeping with Cope (2011), we could argue that how workers respond to failure and insecurity depends not only on individual-level factors but also on the cultural context. According to COR theory, resources are largely

socioculturally framed rather than individualistic, and most perceptions are therefore seen as common to those who share a cultural niche (Hobfoll, 1989, 1998). In this article, we regard culture as a set of shared beliefs and preferences. While culture has received some attention as a determinant of self-employment (see, for example, Hofstede & McCrae, 2004; Uhlaner & Thurik, 2007), the possible buffering role that cultural factors play in the relationship between financial hardship and well-being is insufficiently clear. In relation to the cultural domain, we include the self-employment rate (self-employment as a percentage of total employment) as an indicator for an entrepreneurial culture. When a self-employed worker lives in a country with a large number of business owners, the context is likely to be “designed to facilitate the creation and commercialization of knowledge through entrepreneurial activity” (Audretsch & Thurik, 2010, p. 2). In countries where financial hardship among the self-employed is considered normal due to the economic situation, the self-employed do not consider themselves “deviant” from cultural value patterns (cf. Merton, 1967) and are more likely to report higher levels of well-being. This argument stems from literature stating that the psychological effects of unemployment and financial hardship may be buffered by the labour market status of others. For example, Clark (2003) has shown that the well-being of unemployed persons increases when other members of society become unemployed as well (see also Flint, Shelton, Bartley, & Sacker, 2013). So far, there are no studies testing this specific theoretical claim regarding the self-employed. To explore this buffering effect on the subjective well-being of the self-employed, we hypothesize that:

Hypothesis 4: The self-employment rate buffers the relationship between financial hardship and subjective well-being.

Our final point is that institutional factors play an important role in preventing the economic crisis from affecting mental health (WHO, 2011). The empirical literature has shown that institutions, such as social policies, could be an important buffering factor in an individual’s reaction to feelings of economic deprivation. For example, welfare state policies, such as spending on active labour market policy, may influence the consequences of subjective income insecurity (e.g., Anderson & Pontusson, 2007). The theoretical explanation behind this association is that institutions, such as welfare state configurations, are important providers of social security and may act as stabilizers for the consequences of economic insecurity (Hemerijck, 2013). Based on data from 22 countries collected in the 2010 ESS, Carr and Chung (2014) suggest that perceived employment insecurity is negatively associated with life satisfaction, but the

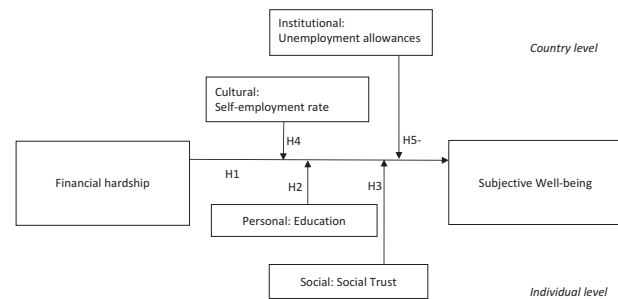


Figure 1. Conceptual research model.

strength of the relationship is inversely related to the generosity of labour market policies. Employment insecurity, in other words, is more harmful in countries where labour market policies are less generous (Carr & Chung, 2014). Regarding the self-employed, we expect that in countries that provide social insurance arrangements for income loss among the self-employed (unemployment allowances), the negative link between financial hardship and subjective well-being will be relatively smaller than in countries that do not offer the self-employed a financial allowance. Following this institutional line of thinking, we suggest that:

Hypothesis 5: Unemployment allowances buffer the effect of financial hardship on subjective well-being.

The conceptual framework in Figure 1 shows the main relationship between financial hardship and well-being and the potential buffering resources in the personal, social, cultural, and institutional domains. The following section describes our methodological strategy for analysing the effects of financial hardship among the self-employed.

Data and methodological approach

Data

We tested our hypotheses by analysing a combined dataset drawn from the ESS. The ESS has equivalent sampling plans across all countries. Its samples are representative of all persons aged 15 and over (no upper age limit) residing in private households in each country. Individuals are selected by strict random probability methods at every stage (ESS, 2010). In our study, we selected all self-employed individuals ($N = 9,755$) from two ESS rounds (years 2004 and 2010). This produced a dataset that provided us with information on all the study variables from 31 European countries (See Table 1).

In the sample, 64% of the self-employed were male and 36% were female. The majority, 61.7%, were employees, while 38.3% were own account workers. The age of

Table 1. Descriptive statistics on country level.

	<i>N</i> round 2004	<i>N</i> round 2010	Total <i>N</i>	Unemployment allowance	Self-employment rate 2004 (%)	Self-employment rate 2010 (%)
Austria	208	0	208	No	13	11.6
Belgium	179	168	347	Yes	14.7	14.4
Bulgaria	0	119	119	No	15.8	12.8
Cyprus	0	179	179	Yes	23.7	18.6
Czech Republic	209	221	430	No	16.9	17.7
Germany	236	267	503	No	12.1	11.6
Denmark	144	142	286	No	8.8	9.1
Estonia	107	104	211	No	9.3	8
Spain	223	264	487	Yes	18.1	16.8
Finland	229	232	461	No	12.5	13.4
France	0	161	161	Yes	11	11.5
Greece	609	639	1248	Yes	36.6	36
HR	0	87	87	Yes	24.1	22.6
Hungary	0	105	105	No	14.4	12.3
Ireland	270	280	550	Yes	17.9	16.9
Israel	0	232	232	Yes	13.2	12.8
Iceland	74	0	74	No	13.2	12.4
Litwania	0	16	16	No	18.8	11
Luxembourg	156	0	156	No	8.2	8.2
The Netherlands	175	206	381	Yes	12.1	15
Norway	183	120	303	Yes	7.5	7.7
Poland	254	226	480	No	26.5	22.8
Portugal	286	309	595	No	25.9	22.8
Rusland	0	117	117	Yes	7.6	— ¹
Sweden	195	169	364	Yes	10.5	10.9
Switzerland	257	174	431	No	16.2	15.3
Slovenia	69	93	162	Yes	15.6	17.3
Slovakia	112	150	262	Yes	12.1	16
Turkey	216	0	216	Yes	49.2	39.1
Ukraine	64	73	137	Yes	16.4	—
United Kingdom	192	255	447	No	13.1	14

Note: ¹Missings were replaced by the self-employment rate in 2004.

the respondents ranged between 15 and 96, with a mean age of 52 ($SD = 15.97$). Concerning education, 12% had a bachelor's degree or higher. In terms of household composition, 45% had children living at home. Among the 31 countries surveyed, 14 countries did not provide unemployment insurance for the self-employed.

Measurements

Subjective well-being was measured using three indicators: "How satisfied are you with life as a whole?", "How happy are you?", and "How is your general health?" Response categories were recoded to range from 1, "very poor," to 5, "very good". We combined these aspects into one measure, based on the notion that "well-being" is a multi-faceted construct that includes cognitive, emotional and functional aspects. Information on the development and validity of this measure is fully documented (OECD, 2013). Following Gudmundsdottir (2013), for example, economic factors are expected to

affect different aspects of well-being. Differences between all three indicators in their relationships with other study variables are small, which is in line with the high Cronbach's alpha reliability of the measure (alpha reliability = 0.70).

Financial hardship was measured by the following indicators (OECD, 2013): "How do you feel about your household income nowadays?" (responses ranged from 1, "allows living comfortably," to 4, "very difficult to live on present income"), and "How easy or difficult is it to borrow money to make ends meet?" (responses ranging from 1, "very difficult," to 5, "very easy"; reverse coded). Guttman Split half coefficient = 0.61.

Educational level was measured using a dummy coded variable, with 1 indicating tertiary education (\geq bachelor's) and 0 indicating lower educational levels.

Trust (0–10) was measured on three items (OECD, 2013): "Most people can be trusted" (coded 10) or "You can't be too careful" (coded 0); "Most people try to take advantage of you" (coded 0), or "Most people try to be fair" (coded 10); and "Most of the time people are helpful"

(coded 10) or “People are mostly looking out for themselves” (coded 0). Alpha reliability = 0.78.

Self-employment rate was taken from the World Bank Database (2014) on the share of self-employment as a percentage of total employment in 2004 and 2010. In this database, the self-employed are defined as “those workers who, working on their own account or with one or a few partners or in cooperative, hold the type of jobs where remuneration is directly dependent upon the profits derived from the goods and services produced”.

Absence of an unemployment allowance or benefit plan was assessed by means of a dummy variable coded 0, “no allowance at all,” and 1, “voluntary or obligatory insurance or state benefit plan”. This variable is based on the MISSOC Comparative Tables Database (2010).

Control variables allowed for on the individual level were: age, gender, and number of children living at home. Tausig and Fenwick (2001) have shown that being a parent is the family characteristic most consistently predicting imbalance between work and the family domain. Children living at home are likely to increase a self-employed person’s financial care responsibility, hypothesized to increase stress and reduce well-being in times of financial hardship.

Methodology

We analysed the data using multilevel, hierarchical linear regression analyses in SPSS version 20 (Heck, Thomas & Tabata, 2010). We expected shared variance in research variables across countries, associated with the self-employed sharing their living environments (cf. Fairbrother & Martin, 2013). This is reflected in a nested structure of the data. Multilevel regression analysis allows testing of models that take into account that individuals are nested within countries, within measurement moments. A stepwise strategy of analysis was applied, using the maximum likelihood method of analysis. Simpler models were compared to increasingly complex ones. The change in log-likelihood fit index was calculated to investigate whether the fit between the more complex model and the data was significantly better (Field, 2009; Heck et al., 2010). Where this was the case, we adopted the more complex model. Finally, because we had only two measurement moments at the third level of analysis and a relatively small number of groups at the country level ($N = 31$), we used a simple bootstrap procedure of 1,000 bootstrap samples to obtain more accurate estimates of standard errors, confidence intervals, and hypotheses tests.

We first tested the extent to which individuals (Level 1) from the same country (Level 2) at the same measurement moment (Level 3) indeed shared variance at the higher level of investigation on the outcome variables of interest. Next, we tested a baseline model with demographic background variables as predictors of the outcome variables of interest, followed by a model including

psychological predictors on the individual level (Model 1) and predictors on the country level (Model 2). Finally, we tested moderator effects by adding interaction terms to the models. Interaction terms were created by multiplying the predictor variables that were hypothesized to interact. Predictors were grand mean centred, as recommended by Heck et al. (2010) and Hox (2002). To investigate interactions as well as random slopes, it is important for “0” to be a meaningful number. In the case of grand mean centring, “0” is a score at the grand mean.

Descriptive statistics

Table 2 shows the means, standard deviations, and correlation coefficients of the study variables.

The raw correlations are in line with the hypotheses, showing positive relationships between financial hardship and well-being. However, significant relationships also emerged between the variables of interest and several demographic variables, controlled for in the multivariate tests below. Regarding the control variable age, we found that on the individual level, younger self-employed individuals report more hardship and better well-being overall. This relationship is reversed on the country level, where there is a negative relationship between age and hardship. Younger self-employed persons experiencing less financial hardship thus appear to be concentrated in some countries. In addition, between 2004 and 2010, men appeared to experience more financial hardship than traditionally disadvantaged groups such as lower educated and female workers. This might be explained by their higher initial employment rates and concentration in sectors hit by the economic crisis, such as manufacturing, construction, and financial services (Cho & Newhouse, 2013). Contrary to our expectations, self-employed persons with children living at home showed higher levels of well-being. Deaton and Stone (2014) argue that people with children enjoy more favourable circumstances that predispose them to have better lives. They found that parents experience more daily stress but also more daily joy than non-parents. In the following section, we test the direct relationship between financial hardship and subjective well-being and then explore the initial descriptives and test the possible moderating effects of resources.

Results

The direct relationship between financial hardship and subjective well-being

To investigate whether financial hardship indeed relates to impaired well-being (Hypothesis 1), we performed multilevel hierarchical regression analyses. The first step was to investigate the multilevel structure of the data. The results showed that people from the same

Table 2. Means, standard deviations, and correlation coefficients of the study variables (lower diagonal deaggregated variables; $N = 9,755$ self-employed workers; upper diagonal aggregated variables, $d = 31$ countries).

	Means	SD	Age	Gender	Education	Supervising	Children	Trust	Hardship	Well-being	Self-employment rate	Unemployment benefit
<i>Individual level</i>												
Age	52.05	15.97	-	.05	-.12	.04	-.69**	.42	-.35*	.46**	-.12	-.46**
Gender ¹	0.36	0.48	.002	-	.03	.16	-.10	-.29*	.42**	-.42**	.03	-.14
Higher education (edu) ²	0.17	0.38	-.12**	.03*	.03	-.38**	.01	.19	-.13	.15	-.40**	-.08
Employer ³	0.61	0.49	.01	.15**	-.08**	-	-.11	-.28*	.35*	-.33*	.48**	-.16
Children ³	0.45	0.50	-.31**	.05**	.01	-.03	-	-.44**	.27	-.27	.26	.27
Social trust	4.96	2.07	.03**	.01	.12**	-.06**	-.03**	-	-.83**	.79**	-.68**	.02
Financial hardship	2.17	0.86	.08**	.09**	-.16**	.19**	.01	-.30**	-	-.44**	.38**	-.17**
Well-being	3.81	0.76	-.15**	-.04**	.13**	-.10**	.04**	.34**	-.86**	-	-.24**	-.05**
<i>Country level</i>												
Self-employment rate	18.96	9.38	.02*	.01	-.17**	.14**	.04**	-.40**	.59**	-.45**	-	-.15
Unemployment benefit ³	0.47	0.50	-.12**	-.03**	.004	-.05**	.05**	.10**	-.09	-.09	-.34**	-

Note: ¹0 = male, 1 = female; ²0 < tertiary ba level, 1 ≥ tertiary ba level; ³0 = no, 1 = yes.
 * $p < .05$; ** $p < .01$.

country at the same measurement moment were indeed more similar than people across countries and measurement moments. For well-being, log likelihood decreased from $-2 \log_{(2 \text{ df})} = 20591.96$ for a one-level structure to $-2 \log_{(3 \text{ df})} = 19332.15$ for a two-level model assuming that people are nested within countries and measurement moments. The results further showed that a three-level model assuming that countries are nested in measurement moments fit the data even slightly better, with log likelihood decreasing to $-2 \log_{(4 \text{ df})} = 19268.54$. Moreover, the variance of intercepts was significant on all three levels: var level 1 = .49, $SE = .001$, Wald $Z = 66.99$, $p < .001$; var level 2 = .10, $SE = .03$, Wald $Z = 3.43$, $p < .001$; var level 3 = .01, $SE = .004$, Wald $Z = 2.47$, $p < .05$.

We next constructed a multilevel regression model controlling for demographic variables and the hypothesized moderator variables “level of education”, “social trust”, “unemployment benefit”, and “self-employment rate”. The results strongly supported Hypotheses 1 (see Table 3): financial hardship was closely related to impaired well-being on top of demographic variables ($B = -.29$, $SE = .01$, $p < .001$).

Buffering effects of resources

Moderator regression analyses showed partial support for the contention that individual and environmental resources can buffer negative effects of financial hardship (Table 3). In terms of individual-level resources, both social trust and higher education buffered the relationship between financial hardship and impaired well-being, thus supporting Hypotheses 2 and 3 (see Figures 2 and 3).

In terms of country-level resources, first we analysed whether the slope (strength of the relationship between financial hardship and well-being) differed significantly between countries. Only then would it make sense to search for cross-level interactions that might explain such cross-country differences. The relationship strength did indeed turn out to differ significantly between conditions: $\sigma^2_{(2,2)}$ was 0.009, $SE = .003$, $p < .01$; change in $-2 \log \text{likelihood}/1 \text{ df} = 54.83$.

No interaction effects were found for a country's self-employment rate. Hypothesis 4 is therefore not supported. Hypothesis 5, which suggests that the availability of unemployment benefits buffers the effect of financial hardship on well-being, was supported. The negative relationship between financial hardship and well-being was slightly stronger for people in countries with no unemployment benefit at all than for people in countries with either a voluntary or compulsory allowance (see Figure 4). This means that unemployment benefits do indeed buffer the relationship between financial hardship and well-being.

Table 3. Results of three-level regression models predicting well-being, direct effects, and moderation effects ($N = 9,755$ self-employed persons in 31 countries).

	Model 1 Controls only		Model 2 Direct effect hardship		Model 3 Individual level Moderation education		Model 4 Individual level Moderation social trust		Model 5 Cross-level Moderation employment rate		Model 6 Cross-level Moderation unemployment plan	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Gender	-.02	.02	.004	.01	.003	.01	.004	.01	.005	.01	.01	.01
Age	-.01***	.000	-.01***	.000	-.01***	.000	-.01***	.001	-.01***	.001	-.01***	.000
Higher education	.14**	.02	.07**	.02	.08**	.02	.07**	.02	.07**	.02	.07**	.02
Employer	-.08***	.02	-.02	.01	-.02	.01	-.02	.01	-.02	.01	-.02	.01
Children at home	.01	.02	.02	.01	.02	.01	.02	.01	.02	.02	.02	.01
Social trust	.09***	.004	.07***	.004	.07***	.004	.07***	.01	.07***	.003	.07***	.004
Country's unemployment benefit	.13	.08	.12	.06	.13	.07	.13	.08	.13	.07	.13	.07
Country's self-employment rate	-.01	.01	-.003	.004	-.002	.004	-.002	.004	-.002	.004	-.002	.004
Financial hardship			-.29***	.01	-.29***	.01	-.29***	.01	-.30***	.02	-.29***	.01
Financial hardship \times moderator					.06*	.02	.02***	.004	-.001	.02	.07**	.03
Level 1 variance (person)	.44***	.01	.40***	.01	.40***	.01	.40***	.01	.39***	.01	.39***	.01
Level 2 variance (country)	.06***	.02	.03***	.01	.03***	.01	.03***	.01	.03***	.01	.03***	.01
Level 3 variance (time)	.01*	.004	.004*	.002	.004*	.002	.004*	.002	.003	.002	.003	.002
Random slope var.									.008*	.004	.007*	.002
-2*log likelihood/ df ¹	18371.43	12	17414.98	13	17408.91	14	17396.65	14	17368.96	15	17364.89	15
Δ -2*log likelihood/ df ¹	897.1***	8	956.45***	1	6.07*	1	18.33**	1	46.02**	2	50.09**	2

Note: ¹In this table, Model 1 is compared to a 0-Model without predictors, Model 2 is compared to the controls-only model (Model 1), moderation models are compared to the direct-effect model (Model 2). * $p < .05$; ** $p < .01$; *** $p < .001$.

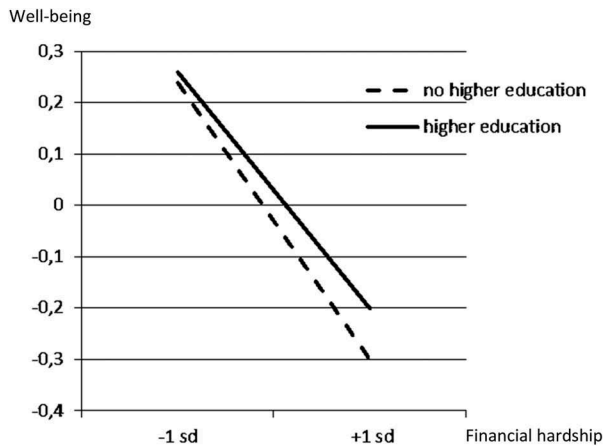


Figure 2. Interaction effect of higher education and financial hardship on well-being.

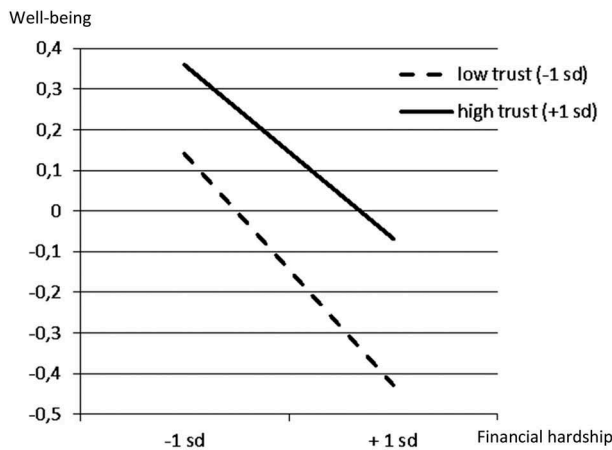


Figure 3. Interaction effect of social trust and financial hardship on well-being.

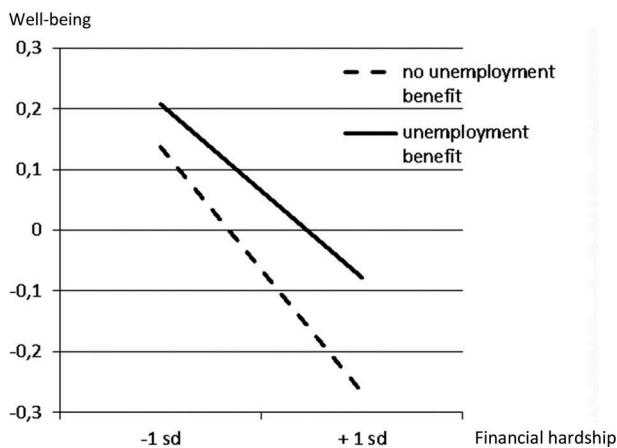


Figure 4. Interaction effect of unemployment benefit and financial hardship on well-being.

In sum

The results of this study reveal not only substantial variation in financial hardship between individuals but also between countries and measurement moments: 16.7% of the total variance in well-being occurred at the country level and an additional 1% within a country and time period. Financial hardship and the background variables age, education, and social trust explained 18% of individual differences and about 64% of cross-country differences in well-being. The results further showed weak support for interaction effects of social trust, higher education, and unemployment plans.

Conclusions and discussion

This article sheds light on the consequences of financial hardship and mitigating factors at differing levels of analysis. More specifically, we aimed to answer the question: “Does financial hardship relate to lower subjective well-being among the self-employed in Europe and how do individual and societal conditions buffer this relationship?”

Based on COR theory, we expected financial hardship to have a direct effect on subjective well-being and hypothesized that individual-level resources (social trust and education) and country-level resources (self-employment rate and unemployment allowance) would mitigate this relationship. Our findings indeed show a strong relationship between financial hardship and impaired well-being, explaining about 36% of variance in well-being between conditions (countries and time period) and 8% of variance between individuals. In other words, the economic conditions matter significantly.

We found that social trust contributed positively to well-being and interacted significantly with financial hardship, buffering its negative relationship with well-being. This result is in line with earlier findings that social capital contributes to feelings of happiness and economic growth (Cote & Healy, 2001; Stiglitz, Sen, & Fitoussi, 2009) and is an important stress buffer (Smart & Leary, 2009; Yamagishi, 1998). Pollack et al. (2012) have interpreted this to mean that social ties buffer the impact of economic stress on depressed affect. This in turn reduces a self-employed person’s intention to withdraw from business (Pollack et al., 2012). Those who appeared most susceptible to the impact of economic stress had relatively limited business-related social ties. Similarly, those most susceptible to the impact of financial hardship most likely have relatively limited social trust. Brewer, Oh, and Sharma (2014) examined the effects of total social welfare expenditures on social trust in 18 OECD countries, with individual characteristics, country characteristics, and country and year effects being constant. Their study found that higher expenditures improve equality, thereby

providing the conditions in which social trust can flourish. Sabatini, Modena, and Tortia (2013) suggest that cooperative businesses may play an especially important role in bolstering resilience to crisis in most economic systems. They suggest that cooperative enterprises—whose aim goes beyond purely maximizing profits—may play a crucial role in the diffusion of trust, thereby reducing uncertainty and transaction costs. Such enterprises enforce contracts and facilitate credit to individual investors, enhancing the efficiency of exchanges and encouraging investment in ideas and in human and physical capital.

The results of this study support the idea of higher education functioning as a buffer against the effect of financial hardship on well-being. One implication for policymakers might be to set up support programmes that focus on lower-educated self-employed persons and to train the self-employed to recognize change and to access subsidies and loans to improve their feeling of control. However, in their literature review, Raposo and Do Paço (2011) argue that education and training should concentrate much more on changing personal attitudes than on knowledge transmission, because the effects may be more significant to the process of business creation and to overcoming perceived barriers to entrepreneurship. Educational systems should also focus on and emphasize the value of entrepreneurship to promote an entrepreneurial culture. In this article, the self-employment rate served as an indicator for entrepreneurial culture. The results showed that the self-employment rate had no significant effect on the relationship between financial hardship and subjective well-being among the self-employed. Future research could include a more direct measure of entrepreneurial culture for the countries covered in this study. Stephan and Uhlaner (2010) have demonstrated the usefulness of measuring culture by means of cultural descriptive norms that reflect the behavioural patterns of a society. A recent study based on panel data across 43 countries shows that these cultural descriptive norms, or informal institutions, have a higher impact on entrepreneurship than formal institutions (Aparicio, Urbano, & Audretsch, 2016). The database of the Global Entrepreneurship Monitor (2015) includes measures such as social values related to entrepreneurial culture and behaviour.

The availability of unemployment allowances for the self-employed predicted less financial hardship and buffered the relationship between financial hardship and well-being. These results are in line with earlier studies demonstrating that the welfare state contributes to subjective well-being (Pacek & Radcliff, 2008). People may feel more secure knowing that they can rely on unemployment benefits if their business earnings should prove insufficient. Established policies such as unemployment allowances or pensions act as institutions that identify who does and does not deserve financial assistance (Raven, et al.,

2011). As such, unemployment welfare schemes can be seen as country-level cultural facets.

Limitations and future research

The data used in this study come from a large-scale international survey. The large number of participants is a strength, but there is a trade-off: the shortened scales used to measure the constructs, the cross-sectional nature of the data, and the reliance on self-reported, single source data. Unfortunately, we could not control for partner's income. A self-employed individual might experience less financial hardship if he or she has a partner whose income contributes to the total household income. In this study we used data gathered in 2004 and 2010. Between these two points in time, the economic crisis led to job losses and economic insecurity for workers across many European countries. The data indicate that this is associated with higher levels of financial hardship, but levels of well-being did not decrease between the two measurement moments. Moreover, models that took the different points in time into account did not show markedly different results than analyses that did not. One reason may be that the economic crisis made itself felt at different time points across European countries and perhaps even across individuals. To study the effects of the economic crisis on self-employed persons' well-being directly, it would have been interesting to collect and test longitudinal panel data.

Our results show that subjective well-being is to a large extent explained by economic conditions and that three important constructs buffer this relationship: education, social trust, and unemployment allowance. It would be worth exploring the effect of these and other potential buffering factors at the country level. Future research might study the effects of other variables representing cultural value patterns in societies, such as tolerance or perceptions of poverty (Oorschot, 2007), individualism/collectivism, referring to the nature of linkages among people (Hofstede, 2001), or human orientation in society, related to the level of expected social support and responsibility for the well-being of others (Powell, Francesco & Ling, 2009). Welter (2012) emphasizes the diversity and complexity of trust. He argues that trust influences self-employment (not always positively), but that entrepreneurial behaviour also has an impact on levels of personal and institutional trust. Further studies might look into more specific types of social support. Another relevant finding for future research is the mitigating effect of unemployment allowance. Future research could include a more detailed measure and focus on the specific conditions in which unemployment allowance is most effective. For example, should it be voluntary or a compulsory insurance? Or should the state provide for a benefit plan?

Contribution

Despite its limitations, this study contributes to existing research by focusing on the self-employed as a distinct category of worker. Applying COR theory to this specific sample, we further explored the different mechanisms at play in relation to well-being, as suggested by Annink, Den Dulk, and Steijn (2015). Since the self-employed themselves have a limited awareness of their well-being (Volery & Pullich, 2010), it is even more relevant to understand, promote, and support understanding of their work psychology.

The theoretical and practical implications of this study are as follows. First, COR theory proved to be useful for studying the effect of financial hardship on well-being from a cross-national comparative perspective. Besides individual personal resources (education), we included sociological (social trust) and country-level cultural (self-employment rates) and institutional (unemployment allowances) resources in the model. The context of the study was self-employment and it revealed that responses to stressful circumstances depend not only on the self-employed individual but also on the environment. The implication is that while the self-employed are frequently considered risk-taking and autonomous individuals, they can still benefit from collective government programmes and social conditions (social trust). Rocco, Fumagalli, Suhrcke (2014), however, found that individual social capital, focusing on values, norms, and beliefs, is far more important than community social capital as a determinant of health. This implies that interventions may be more through education, training, or coaching (cf. Iakovleva et al., 2014). Similar to “regular” employees, the self-employed have to cope with their problems during the life course (Veenhoven, 2008). As this study points out, it would be worth studying possible moderators for the effect of financial hardship on well-being among the self-employed.

The second outcome of this study is that it provides the basis for public policy recommendations regarding the self-employed. Policy decisions in response to workers’ financial hardship have pronounced and unintended effects on public health (Karanikolos et al., 2013). Policy instruments aiding the self-employed are nothing new, but they are given higher priority in times of financial hardship (European Foundation, 2011). Sarfati (2013) argues that policies should focus especially on the self-employed, in view of their high job-creation potential. Bunk, Dugan, D’Agostino, and Barnes-Farrell (2012) remark that policies aimed at supporting quality of life need to recognize differences among the self-employed. The work arrangements of self-employed individuals differ in important ways that have implications for their occupational experiences and personal well-being. As Raposo and Do

Paço (2011) note, the growing interest in entrepreneurship education and research on the impact of such education raise some important policy questions both for the institutions that deliver entrepreneurship educational programmes and for support organizations that provide funding.

This article has shown that, despite the strong effect of economic situation, there are ways to improve self-employed persons’ well-being. We have made a number of suggestions for researchers and policymakers. We feel that this topic should not only be given priority in the new Europe 2020 strategy but should also be at the top of research agendas.

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